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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,352	01/14/2002	John V. Gates II	37310-000157	2560

30595 7590 03/29/2004

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RESTON, VA 20195

EXAMINER
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RAHLL, JERRY T

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/046,352

**Applicant(s)**

GATES ET AL.

**Examiner**

Jerry T Rahll

**Art Unit**

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 5-8 and 15-22 is/are allowed.
- 6) ☒ Claim(s) 9, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 4 and 10-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings submitted 14 January 2002 have been reviewed and determined to facilitate understanding of the invention. The drawings are accepted as submitted.

### ***Claim Objections***

2. Claims 4, 11 and 12 objected to because of the following informalities. Appropriate correction is required.

3. Claims 4 and 12 describe “said step of determining the destination of the signal as a function of mirror position”. There is no antecedent basis for such a step. For examination purposes, the methods of Claims 4 and 12 are considered to have such a step, distinct from those described in Claims 1 and 9.

4. Claim 11 refers to “the estimated values.” There is no antecedent basis for such values. For examination purposes. Claim 11 is considered to depend from Claim 10, which does describe estimating values.

### ***Claim Rejections - 35 USC § 112***

5. Claim 13 recites the limitation "the transformation" in Claim 9. There is insufficient antecedent basis for this limitation in the claim. It is not clear if “the transformation” refers to either of steps (a) or (b) in Claim 9, or some step not described in the method of Claim 9.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 9 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,411,751 to Giles et al.

8. Giles et al. describes a method of preparing a MEMS device and another optical device including determining a relationship between applied voltage and angle response for a number of elements of the MEMS device and determining a function of beam position and element position for the number of elements of the MEMS device (see Columns 7-8). Further, Giles et al. describes the MEMS device and another optical device as gimbaled mirror arrangements (121), non-moving elements (120) and optical fibers (105) (see Figure 2 and Columns 3-4).

***Allowable Subject Matter***

9. Claims 1-3, 5-8 and 15-22 are allowed.

10. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 1-8, and 15-22 describe a method of calibrating a crossconnect including a MEMS device and another optical device including determining a transformation for the sample connections caused by packaging the crossconnect and redetermining the relationship and function of beam position and element position based on the transformation. Claims 10 and 11 describe using a combination of measuring values and estimated values in determining a relationship between the applied voltage and the angle response. Claim 12 describes determining the destination of the signal as a function of mirror position using raytracing.

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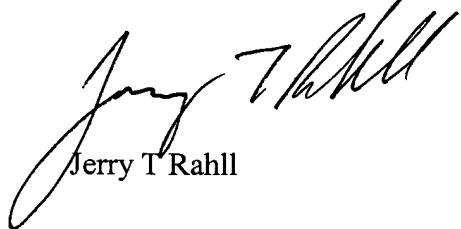
12. This is subject matter not described by the prior art.

***Conclusion***

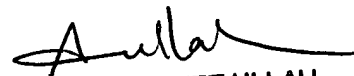
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry T Rahll whose telephone number is (571) 272-2356. The examiner can normally be reached on M-F (8:00-5:30), with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jerry T Rahll



AKM ENAYET ULLAH  
PRIMARY EXAMINER